Analysis of the correlation between the evolution of the consumer loans and the evolution of household income in Romania

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Abstract. *Study of the literature and the models used in other countries, with higher or lower degrees of development for their financial and banking systems, raise for Romania, in our opinion, several issues which deserve a closer research. One of those issues concerns the fundamentals of real estate prices and the influence of household income, demographic changes and credit access on the dynamics of the housing market.*
Another area of interest is centered on the manifestation of a wealth effect that is associated with owning a property; as such an effect is present in other countries, as reported in literature. The National Bank of Romania defines this phenomenon as "the effect of the wealth value on the decisions of the population and the companies, regarding their consumption and investment decisions". This effect can be generated either by variations in the value of assets owned (stocks, financial assets, real estate, etc.), or by the level of debt (i.e. housing, consumption, investment loans, including payments due). Therefore, such an increase in the population's net wealth or an improvement of companies' balance sheets can manifest a positive effect on consumption and investment, thus benefiting the aggregated demand.
In a future research we plan to study the influence of the real estate market on Romania's economy, especially through lending, construction activity, household consumption and stock market investment, with the aim of measuring this effect. The three directions for research require in-depth analysis of the complex dynamics of the sectors connected to the housing market and the acquiring of pertinent and up-to-date

statistical data which should reflect price changes and other parameters of this field of study.

Given the limitations of our database, with a narrow access to data regarding the direct population consumption, we have chosen to use the values for lending in lei as a proxy, which indirectly mirrors the indicator we wish to include in the research. We believe that the final purpose of the consumption loan reflects, in a significant measure, the population's inclination towards consumption. With this in mind, we will analyze the correlation between the evolution of consumption lending and the population income. From here we will ascertain the inclination towards housing investment.

Keywords: consumption credit; population income; differentiation; normalcy; stationarity; residual autocorrelation; statistical validity.

JEL Classification: C58; D14; E52; G21.
REL Classification: 11B.

1. Database

Our research aims at understanding the mechanisms of the interactions between the real estate market and the rest of the economy, through the analysis of data about the main indicators defining these fields. In concept, the housing market is in no way different from other goods markets, and as such the information of the pricing of such assets is of major importance.

Essential information for our analysis regards data reflecting the evolution of salary income for the population and that for consumption lending. The sources of this data include the periodical reports from the National Institute of Statistics and the reports of the National Bank of Romania or its monthly statistical reports. Also, data for the exchange rates are taken from the interactive database provided by the central bank.

As a general observation, we point out our decision to transform all data from lei to Euro, at the official exchange rate of the last day of the respective time frame. This is justified by the peculiarities of the housing market, the price of all assets being invariably expressed in Euros. Also, loans for housing purposes are, as well, denominated in the European currency, which is the reason we have chosen to use this exchange approach for all the other relevant indicators.

Analysis model

Our model is based on *Wealth Effect Revisited* (Case et al., 2011) and *Wealth Effects out of Financial and Housing Wealth* (Sierminskaya, Takhtamanova, 2007). The first is an effort to understand the behavior of American consumers during 1978-2009, undertaken by Karl Case, John Quigley and Robert Shiller, starting with 2005 and providing evidence of a national wealth effect manifesting in the United States, by correlating income, housing and financial wealth.

The second article, published as Federal Reserve Bank of San Francisco working paper, deals only with data from Canada, Italy and Finland, and shows that the wealth effect on consumption, generated by the real estate, is more powerful than that of financial holdings.

Resuming consumption and investment lending in sustainable conditions is still far away, while taking into consideration the prolonging and even intensification of cross-border financial deleveraging and monetary accommodation competition between the large central banks.
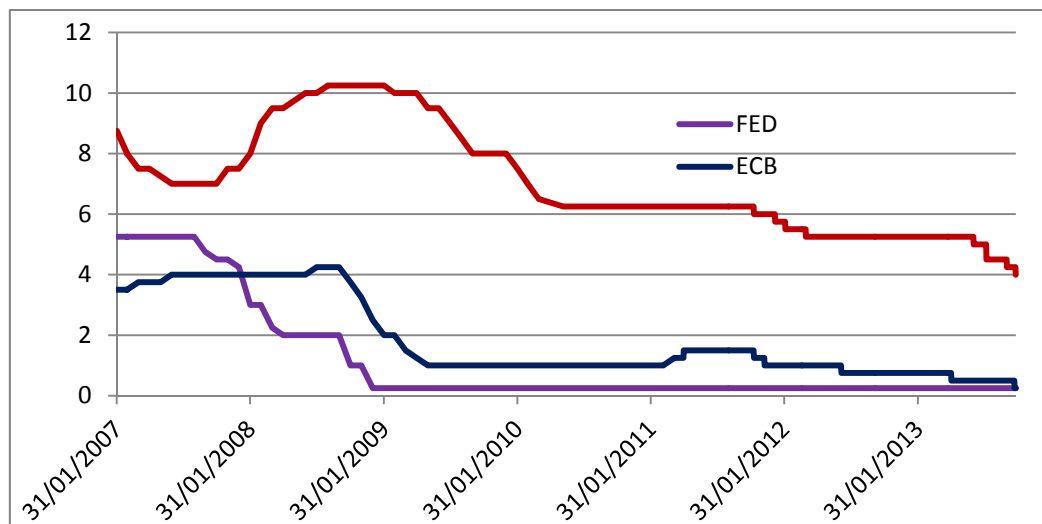
Figure 1. *Central interest rates of FED, BCE and BNR*

Regarding the demand for consumption credit, the continuous reduction of the central interest rate (the last one in November 2013, with a decrease to 4%; see graph), a process which should bring, based on a functional mechanism of transmission and a comfortable monetary space, a favorable adjustment of credit and lending rates. By December 2013, in the last five years, the central bank (see graph) has tenaciously decreased the central rate, starting from September 2008, by 6, 25 percentage points, down from 10, 25%.

The most remarkable effect is that only in the first part of this process the central bank's signals for credit cost cutting have been immediately and sustainably incorporated by commercial banks within their offers for new lending in lei towards non-financial customers, but this process has since slowed down along with the ever lower marginal effects of reduction for the monetary rate into lending rates. A more comprehensive explanation for this effect should include the two-way influence of a plethora of other economic, social and political factors: the feeble, but determined recovery of business activity, resuming the increase in average income for the population, exchange rate stability and stable unemployment.

This research paper attempts to mainly incorporate some examples of analysis from the two aforementioned papers, and also from several others recently published. Because we have been unable to obtain data concerning directly the population's consumption, we have chosen instead to use a data set which captures it indirectly, which is the total lending towards the population for consumption, in lei. We consider that, usually, the destination of such a loan

reflects in a reasonable good measure the inclination towards consumption in Romania.

In a larger context, the monetary stability and the persistent disinflation process can aid significantly the credit worthiness of those in need of consumption or of housing loans. Therefore, although the Romanian financial sector lays within the influence of the regional, European and international deleveraging process, through the adjustment of banks' and investment companies' balance sheets, the local economy does hold better auspices for the sustained increase of both supply and demand of credit. These two elements are essential towards the advance for a more sustainable and vigorous economic growth. Still, the potential for lending towards the population remains and will stay at low levels – mostly for housing loans, and we estimate a stabilization for the consumption credit demand, due to the improvement in the public's perception towards economic growth, political and economic stability, a stable exchange rate and a sustained disinflationary process, all having serving as a cumulative favorable impulse for the financial standing.

Even though for 2013 we see an improvement in the outlook for both the consumers and the investors (recently, the Nuclearelectrica and Romgaz IPOs have significantly increased the appetite for the stock exchange risk, seen with the usage of credit lines for the IPO oversubscription anticipated by the investors), an end to the cycle of tough credit standards by the banks, a continuation of the BNR relaxed monetary policy cycle (in a concerted manner, alongside other important central banks), the dynamics of lending towards the private sector is, for now, neutral-towards-negative, due to the overall debt ratio of the population.

The effect is further compounded by the banks orientation towards financing non-financial entities and, to a lesser extent, the population.

The consumption, and the credit for consumption are both on a downward trend, but we expect a slight pick-up especially in the second part of next year, when strict fiscal deficit management measures will allow for opportunities of fiscal support (reduction of social contributions, VAT) and monetary support (reductions in minimum reserves and of the central interest rate) for the economy. Also, for the Romanian economy we see a low degree of availability for long term resources in national currency, influence which can be seen in the discount (returns, respectively) rates which are too high compared to the long tenors for real estate and construction loans. Therefore, on the supply side of the consumption credit, the main support comes from improved liquidity of the market, and this funds inflow has an effect on interbank rates, which have decreased due to intense competition among the credit institutions.

On the other side, Romania's economy still suffers from the banks' low risk appetite (and as a persistent effect of the stringent need for liquidity of the foreign main offices and Romanian branches), from the sustained deficit of direct foreign investment, but also from low rates of internal savings. While the (over)extension of consumption and housing loans was due to credit denominated in foreign currencies and for long periods of time, the precautionary savings are mostly consistent of lei, and for the short term. The debtor population has, as it turns out, an important exposure on foreign currency, but also one of maturity transformation, because in general the population's savings are done for the short term, while their obligations are for the long term. During economic boom times, even the credit for consumption purposes, backed by real estate collateral, was usually granted for long or very long periods, and the present effect of such excess is self-evident, especially through the high degree of default for loans in foreign currency compared to the ones granted in lei, especially for the consumption credit, but for the housing loans as well.

It is interesting to notice that, starting with the first half of 2012, when the signs of macroeconomic stability have started to become more obvious, the population turned from a net debtor into a net creditor of the banking system, an effect which should lead, in our opinion, to an improvement in the population's ability to honor the debt, due to an increase in savings, especially cautionary deposits.

Research character and sources of error

The main concern regarding the accuracy of the present research comes from the quality and quantity of the information available to us. In this case, most of the data sets concern the 2004-2012 intervals, which were recognized for atypical and important changes in all indicators of the national economy. We recognize that the not so large number of observations poses a possible cause for inadvertencies. Another source of errors could be our choice for the total consumption lending values for individuals, in lei, for which we have records with a monthly frequency, and not the quarterly new credit values.

Regarding the systemic risk (which is mainly represented by the potential for adverse shocks from the direction of the interest rate, the exchange rate and the economic growth), the lending for consumption and housing, for the long term, are the most sensitive in relation to an increase in the interest rate, especially for debtors with small incomes. For these, according to BNR[1], the debt ratio can be increased by as much as 10%, and so it will lead to an adverse change in the ability to repay the loans, especially the consumption type.

Moreover, people with small incomes, those with salaries below the national average, are more exposed to a potential unfavorable evolution of the labor market, less able to mitigate the effect of diminished capacity for repayment of

loans. The current trend of decrease in interest rates is perceived as most favorable, especially by the debtors with small incomes, and the disinflationary process, with the concurrent decrease in interest rates, can only help the repayment capacity.

For instance, the nominal wage has increased in November 2013 compared to the same month the previous year by 3, 5%, and with an average inflation of 2% we get a real increase of 1, 5%, which is a slight but important improvement for the financial standing of the consumer or the debtor, and a psychological support for dismissing the pessimism regarding the evolution of the real economy and the labor market. As for the support given through bank lending for the consumption and housing loans, the banks' lack of appetite can be justified by the deficit of real demand on behalf of the clients.

We will try to integrate in our comments the possible effect of the population's standing and their support for the investment and savings behavior, respectively over the propensity for new loans for consumption or real estate acquisition.

At present, the high degree of population debt, especially in foreign currency, is still the main vulnerability of the consumption an real estate sectors, due to the high levels reached and due to the structure of currency, time frame, credit type and income category. These influences can significantly affect a sector's ability to honor its debt, when faced with the pressures of economic and financial uncertainty.

From the beginning we have identified the correlation matrix between the evolution of consumption credit and population income in Romania. Afterwards, through the OLS method we put together the influence of the variable income over the population's debt for consumption in lei, this being the most adequate means for ascertaining consumption. In the end, by applying the model, we have identified the coefficients of the external variables.

Empirical results

The dependencies we have observed are shown as graphs and commented upon, case by case. All data sets represent the evolution of monthly consumption credit and the population's income for Romania, between 2004 and 2012.
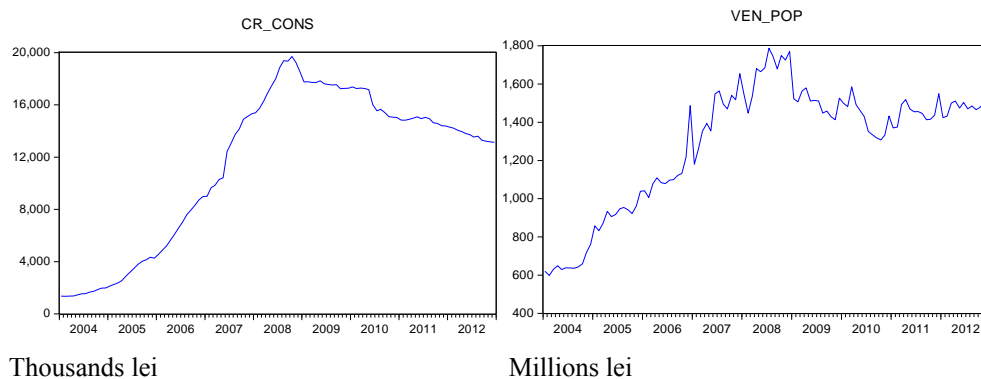
CR_CONS

VEN_POP

Thousands lei   Millions lei

Figure 2. *Graphical evolution of consumption credit vs. population income*

Although the two data sets are in different units (thousands and millions, respectively), the correlation of consumption credit and the population income is evident, although the latter has higher time variability. In the last years of economic and financial crisis, lending has taken a downturn, even though the income has picked-up starting with 2010 and up to now.

The decision to take on a loan for housing or real estate investment purposes, especially during economic boom times, before the crisis, influences in a great degree the population's financial standing and debtor behavior, both on the short and the long term. If before the crisis, the increases in value for the housing stock presented good collateral for a big consumption loan, now this is no longer possible, especially because the credit is still too expensive.

Therefore, 43% (approximately 4,3 million people) of Romania's active population has a standing loan with a bank or a non-financial institution, and has an average housing debt exposure for 22 years, and seven years respectively for consumption loans not collateralized by mortgages. Moreover, the high ratio of foreign currency debt is over two thirds, 95% for construction loans and consumption mortgage loans of about 90%. These ratios have supported the necessity to regulate the debt ceiling for a person, with the purpose of providing him or her with a constant ability to sustain the debt, throughout the entire personal economic cycle.

Central bank statistics show that the debtors who are unable to pay their debts to the banks have a debt ratio of over 4% in the case of consumption loans, and over 70% in the case of housing loans[2]. Consequentially, an acceptable level for the debt ceiling should be about 30% for the consumption loan (including credit cards, overdrafts, leasing and others) and approximately 50% for the housing loan. The descriptive statistics of the two data sets show a higher dispersal around the median, in the case of consumption loans (variance coefficient = 0, 5), related to the population income (the variance coefficient is 0, 25; half as large).

	CR_CONS	VEN_POP
Mean	11567.41	1297.345
Median	14099.87	1431.895
Std. Dev.	5941.139	321.5378
Coef. variation	0.51361	0.247843
Skewness	-0.558830	-0.801587
Kurtosis	1.804172	2.516993
Jarque-Bera	12.05625	12.61558
Probability	0.002410	0.001822

The Jarque - Bera statistics have low probabilities (0.24% and 0.18%) to indicate normal distribution sets. A first criterion of validation for the assumed correlation model (Consumption credit ~ Population income), regarding the normality of data distribution, is not confirmed. We will use the other criteria: stationarity of data evolution, elimination of residual autocorrelation.

The following correlation matrix indicates an evident intensity, as it was expected, for the link between the consumption loan evolution and the population income (correlation coefficient is 0.94, with a determination coefficient of $0.94^2 = 88\%$).

	CR_CONS	VEN_POP
CR_CONS	1.000000	0.944231
VEN_POP	0.944231	1.000000

The stationarity test verifies the probability of existence or non-existence of time variations for the median and the dispersion, variations which invalidate the correlation model.

In our analysis, both data sets have high probabilities (over 33% and 23, 74% respectively) for non-stationarity, which invalidates the possible model of correlation between the analyzed set in absolute figures.

The situation, for each variable:

Null Hypothesis: **CR_CONS** has a unit root
Exogenous: Constant
Lag Length: 2 (Auto - based on SIC, maxlag=12)

		t-Statistic	Prob.*
ADF test statistic		-1.901802	**0.3304**
Test critical values:	1% level	-3.493747	
	5% level	-2.889200	
	10% level	-2.581596	

Null Hypothesis: **VEN_POP** has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=12)

		t-Statistic	Prob.*
ADF test statistic		-2.119906	**0.2374**
Test critical values:	1% level	-3.493747	
	5% level	-2.889200	
	10% level	-2.581596	

		t-Statistic	Prob.*			t-Statistic	Prob.*

Null Hypothesis: **D(CR_CONS)** has a unit root
Exogenous: Constant
Lag Length: 1 (Auto-based on SIC, maxlag=12)

Null Hypothesis: **D(VEN_POP)** has a unit root
Exogenous: Constant
Lag Length: 1 (Auto - based on SIC, maxlag=12)

		t-Statistic	Prob.*			t-Statistic	Prob.*
ADF test statistic		-3.558860	**0.0083**	ADF test statistic		-10.30184	**0.0000**
Test critical values:	1% level	-3.493747		Test critical values:	1% level	-3.493747	
	5% level	-2.889200			5% level	-2.889200	
	10% level	-2.581596			10% level	-2.581596	

After the first differentiation (D (CR_CONS and D (VEN_CONS) stationarity is eliminated. We have probabilities of 0% for non-stationarity, which encourages us to analyze the correlation between these variables, as in the tables above.

Analysis of the correlation between the evolution of consumption loans and population income

We set out to identify the most adequate statistical model for explaining the evolution of the consumption loans. At a first attempt, the explanation can be attributed to the evolution of monthly population income. Because the model is not validated statistically, we will attempt several explanatory models, based on the previous evolution of credit and income.

Model 1 of regression: CR_CONS = -11067.1 + 17.4468 × VEN_POP

Encouraged by the intensity of the correlation between loans and income, in the first model of regression we have analyzed the co-dependency between the absolute values of the two variables. We know that these absolute data sets have a non-stationary evolution and, consequentially, the regression model will not be validated.

Dependent Variable: **CR_CONS**
Method: Least Squares
Date: 08/25/13   Time: 20:50
Sample: 2004M01 2012M12
Included observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	**-11067.10**	789.6598	-14.01503	**0.0000**
VEN_POP	**17.44680**	0.590957	29.52294	**0.0000**

R-squared	0.891572	Mean dependent var	11567.41
Adjusted R-squared	**0.890549**	S.D. dependent var	5941.139
S.E. of regression	1965.532	Akaike info criterion	18.02326
Sum squared resid	4.10E+08	Schwarz criterion	18.07293
Log likelihood	-971.2560	Hannan-Quinn criter.	18.04340
F-statistic	871.6038	Durbin-Watson stat	**0.373285**
Prob(F-statistic)	**0.000000**		

The model presents a very good R^2 (89%) and a very good statistical significance (0% probability that the model has, in general but also for each variable, coefficients close to zero). Unfortunately, the Durbin-Watson statistic is very low compared to the ideal value of 2 (=0.37), which signifies the existence of residual autocorrelation for the model. This can be eliminated by the first differentiation.

Model 2 of regression: DCR_CONS = 92.335 + 1.832×DVEN_POP

In the second model of regression we use the differences between absolute values, which have been proven to be stationary.

Dependent Variable: **DCR_CONS**
Method: Least Squares
Date: 08/25/13   Time: 21:06
Sample (adjusted): 2004M02 2012M12
Included observations: 107 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	92.33517	33.06361	2.792653	**0.0062**
DVEN_POP	1.831996	0.446813	4.100137	**0.0001**

R-squared	0.138010	Mean dependent var	110.0225
Adjusted R-squared	**0.129800**	S.D. dependent var	363.5000
S.E. of regression	339.0891	Akaike info criterion	14.50892
Sum squared resid	12073052	Schwarz criterion	14.55888
Log likelihood	-774.2271	Hannan-Quinn criter.	14.52917
F-statistic	16.81112	Durbin-Watson stat	**0.923687**
Prob(F-statistic)	**0.000082**		

The adjusted R^2 for this model is, this time, very small (13%), which proves the fact there other variables exist which explain the evolution of the consumption loans.

The model has, again, a very good statistical significance (0% probability that the model has, in general, but also for each individual variable, coefficients close to zero).

The Durbin-Watson statistic is again inferior to the ideal value of 2 (=0.92), which signifies the existence of residual autocorrelation for the model. Consequently, we will insert a new independent variable, to better explain the evolution of monthly consumption loans.

Model 3 of regression: DCR_CONS = 40.33 + 1.5 × DVEN_POP + 0.5 × DCR_CONS (-1)

The third model of regression is improved by adding a second independent variable, formed by the previous differences between the monthly consumption loans (DCR_CONS (-1)):

Dependent Variable: **DCR_CONS**
Method: Least Squares
Date: 08/25/13   Time: 21:48
Sample (adjusted): 2004M03 2012M12
Included observations: 106 after adjustments

Variable	Coeff	Std. Error	t-Statistic	Prob.
C	**40.33204**	29.48679	1.367800	0.1744
DVEN_POP	**1.502824**	0.384511	3.908399	**0.0002**
DCR_CONS(-1)	**0.502009**	0.077968	6.438613	**0.0000**

R-squared	0.384936	Mean dependent var	111.1993
Adjusted R-squared	**0.372993**	S.D. dependent var	365.0220
S.E. of regression	289.0381	Akaike info criterion	14.19889
Sum squared resid	8604933.	Schwarz criterion	14.27427
Log likelihood	-749.5411	Hannan-Quinn criter.	14.22944
F-statistic	32.23117	Durbin-Watson stat	**2.224517**
Prob(F-statistic)	**0.000000**		

The third model is the one which best fulfills the validation conditions of the correlation between the consumption loans and the population income: adjusted R^2 of median value (over 37%), a very good statistical significance (0% probability that the model has, in general and also for each individual variable coefficients close to zero).

The Durbin-Watson statistic is close to the ideal value of 2 (=2.2), which signifies the quasi-inexistence of residual autocorrelation for the model.

The conclusion is that the monthly variance of consumption loans is justified in a significant proportion (over 37%) by the monthly evolution of population income, but also by the previous variation of the loans value.

Model 4 of regression: DCR_CONS = 41.6 + 1.3 × DVEN_POP + 0.56 × DCR_CONS (-1) - 0.735 × DVEN_POP (-1)

We set out to continue the analysis and to add, to the fourth model of regression, a third independent variable, consisting of the previous differences between the monthly population income values (DVEN_POP(-1)). Also, it is relevant that we

use the previous income figures (in absolute or differentiated values), because the intensity of the correlation between the variables we have studies (consumption loans and population income) recommends the income as an explanation for the evolution of the credit values.

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Dependent Variable: DCR_CONS
Method: Least Squares
Date: 11/07/13   Time: 08:07
Sample (adjusted): 2004M03 2012M12
Included observations: 106 after adjustments
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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.60917	29.23381	1.423324	0.1577
DVEN_POP	1.303868	0.398829	3.269241	**0.0015**
DCR_CONS(-1)	0.563796	0.085475	6.596054	**0.0000**
DVEN_POP(-1)	-0.735066	0.434629	-1.691250	**0.0938**

R-squared	**0.401714**	Mean dependent var	111.1993
Adjusted R-squared	**0.384117**	S.D. dependent var	365.0220
S.E. of regression	286.4627	Akaike info criterion	14.19010
Sum squared resid	8370212.	Schwarz criterion	14.29061
Log likelihood	-748.0753	Hannan-Quinn criter.	14.23084
F-statistic	22.82899	Durbin-Watson stat	**2.270058**
Prob(F-statistic)	**0.000000**		

The fourth model also satisfies the condition for the correlation validation between loans and income: the adjusted R2 has an average value (over 38%), a good or very good statistical significance (0% probability that the model has, in general or for each variable coefficients close to zero, with the exception of the newly used variable, which has a 90.62% probability of being significant (=100%-9.38%)). The Durbin-Watson statistic is relatively close to the ideal value of 2 (=2, 27), which signals the quasi-inexistence of residual autocorrelations for the model.

Model number 4 explains the fact that the monthly variation of consumption lending is determined, in a significant proportion (over 38%), by the monthly variation of population income, by the previous monthly variation of the consumption lending, but also by the variation in the month prior of the population income figure itself.

Both the number 3 and the number 4 models generate a good explanation for the evolution of consumption credit. These prediction must take into consideration the government's policy regarding population income (a policy which is to be rather stimulating during the next electoral years), gut also the credit policy of commercial banks (also stimulating, considering the BNR decision to cut the interest rate).

Conclusions

Even though the correlation between the evolution of consumption loans and the population income is evident (89%), the first model of regression, although valid by many criteria, suffers from the non-stationarity of data series and the existence of residual autocorrelation.

After again differentiating with a first order the variables analyzed, Model number 2 has stationary data series but loses a great deal of its explanatory power: the adjusted R^2 of only 13% signals that there are other factors which can explain the evolution of consumption lending, besides the population income. The Durbin-Watson statistic of only 0.92 indicates the presence of residual autocorrelation for the variables.

A better adjusted R^2 coefficient (37%) is obtained by Model number 3, which explains the monthly variation of credit values (DCR_CONS) by the monthly change in population income (DVEN_POP) and the previous variation in the lending itself (DCR_CONS(-1)).

The sensitivity coefficients of the identified factors are validated with a very good degree of significance (probability of 100% of statistical significance), and, overall, the model is also valid with a 100% probability of being significant. The Durbin-Watson statistic is almost optimal (at 2.2) and also confirms the quasi-inexistence of residual autocorrelation between the variables. The model, overall, meets most of the criteria for multiple regression equation validity.

In the case of the fourth model, the R^2 coefficient of determination has a significant value (38%), which explains the monthly variation of consumption lending (DCR_CONS) through the monthly change of population income (DVEN_POP), the change of previous lending (DCD_CONS(-1)) and the previous variation of the population income (DVEN_POP(-1)).

The correlation has an adjusted R2 of correlation in the average value (over 38%), a good and very good statistical significance (probability of over 90% for both the coefficients of the explanatory variables).

The influence of the macroeconomic context is shown in a limited way by the models we have presented. The corrective trend of the real estate values is, still, a main vulnerability for debtors and lenders alike, both for the consumption credit backed by mortgage and for the housing loan. We estimate that a certain favorable effect of wealth perception balances the risk of corrections, through the less negative dynamics of such assets' evaluation, due to smaller discount rates, which result as a lesser risk is perceived due to lower interest rates for the short and long term. The loans with the biggest non-performance (over 90 days late for payment) are those granted in the economic boom times of 2007 and 2008. Those

consumption loans and housing loans had a Loan-To-Value Ratio (LTV ratio) of over 90%.

As the most important systemic risk comes from denominating the credit in other currencies than the debtor's own income, the theme of global risks which are inherent to foreign currency lending is now in the sights of both central and commercial banks. For instance, banks are now required to clearly inform the debtors who are un-hedged against currency losses of the incurred risk of foreign currency lending, which can manifest themselves through the sudden depreciation of the national currency and is usually accompanied by an increase in interest rates for the said currency.

An alternative for such exposures should be offered by the lending using the national currency, or the acquisition of financial instruments for protection against foreign exchange rate risk. Therefore, regarding a loan which is not covered for exchange rate risk, this type of instrument can be accessed only by clients who present a significant good standing. This good standing is, in fact, the capacity to sustain adverse shocks in the areas of interest rate and foreign exchange rate, and therefore a relative immunity towards the malaise of the economic cycle, which can extend itself for the entire duration of the loan itself.

We will try to corroborate these factors in future research, in which we will analyze the evolution of housing and consumption credit in Romania, in order to identify the factors which present the evolution of the real estate market, the effect on the population wealth and the decisions for saving vs. investing they can adopt.

Notes

[1] See National Bank of Romania, Report on the financial stability 2012, pp. 131-132.
[2] See National Bank of Romania, Report on the financial stability 2012, p. 134.

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